

Linzer biol. Beitr.	46/2	1569-1580	19.12.2014
---------------------	------	-----------	------------

Notes on Palaearctic species of the family Leucospidae (Hymenoptera, Chalcidoidea), with new records from North Africa and Middle East

M. MADL & M. SCHWARZ

A b s t r a c t : New records of the family Leucospidae (*Leucospis biguetina* JURINE, 1807, *L. brevicauda* FABRICIUS, 1804, *L. dorsigera* FABRICIUS, 1775, *L. elegans* KLUG, 1834, *L. gigas* FABRICIUS, 1793 and *L. intermedia* ILLIGER, 1807) are provided from North Africa and Middle East. The publication date of KLUG's paper (Die europäischen Arten der Insekten-Gattung: *Leucospis*) is 1812.

Key words : Leucospidae, *Leucospis*, new records, catalogue, North Africa, Middle East, Afghanistan, Pakistan.

Introduction

In the Palaearctic region the genus *Leucospis* FABRICIUS, 1795 contains 14 species (BOUČEK 1974). The taxonomy of the species is well known, but there are still gaps in the knowledge of the biology and distribution.

In this paper the species occurring in North Africa, Middle East countries (excluding Turkey), Afghanistan and Pakistan are treated and only papers dealing with this area are listed. Synonyms or misidentifications are marked with an asterisk (*). The general distribution data are based on an unpublished catalogue compiled by M. Madl.

In the last years we have identified Palaearctic material of the Biologiezentrum des Oberösterreichischen Landesmuseums at Linz (Austria) and the Naturhistorisches Museum Wien (Austria). New records of *Leucospis biguetina* JURINE, 1807, *L. brevicauda* FABRICIUS, 1804, *L. dorsigera* FABRICIUS, 1775, *L. gigas* FABRICIUS, 1793 and *L. intermedia* ILLIGER, 1807 from the southern Palaearctic region (North Africa and Middle East) are dealt with. The material listed below is deposited in the Biologiezentrum des Oberösterreichischen Landesmuseums at Linz unless stated otherwise. The material of the Naturhistorisches Museum Wien is indicated NHMW.

Prof. R. Abraham (Hamburg, Germany) kindly sent us the unpublished file with the data of the *Leucospis* species housed in the Zoologisches Museum Hamburg (ABRAHAM & PETERS 2011: 267). The exact data of *Leucospis gigas* from Algeria and Israel and *L. dorsigera* from Israel are also listed.

On the publication date of F. KLUG: *Die europäischen Arten der Insekten-Gattung: Leucospis*

When we read the statement by BOUČEK (1974: 150), that *Leucospis varia* KLUG and *L. grandis* KLUG were figured as early as 1814 in AHRENS, we could not believe, that the paper of KLUG (*Die europäischen Arten der Insekten-Gattung: Leucospis*) had been published in the same year. After a long search we found in Germar's *Magazin der Entomologie* **1** (1) (p. 60) the note, that volume 6 (1) of the journal "*Magazin der Gesellschaft Naturforschender Freunde zu Berlin für die Neuesten Entdeckungen in der Gesamten Naturkunde*" had been published in 1812. Consequently the publication date for the following *Leucospis* species described by KLUG is 1812: *aculeata*, *bifasciata*, *gibba*, *grandis* and *varia*.

Abbreviations

biol.	biology
cat.	catalogue
design.	designation
distr.	distribution
ed. (eds)	editor (editors)
fig. (figs)	figure (figures)
NHMW	Naturhistorisches Museum Wien
pl. (pls)	plate (plates)
syn.	synonym
tab.	table
tax.	taxonomy

Catalogue and material

Leucospis bifasciata KLUG, 1812

Leucospis bifasciata KLUG, 1814: MASI 1949: 91 (tax., Israel).

Leucospis bifasciata KLUG, 1814: BOUČEK 1959: 436 (key), 439 (figs 13-21), 440 (tax., Israel (locality see fig. 17)).

Leucospis bifasciata KLUG, 1814: BOUČEK 1974: 102 (key), 115 (fig. 175), 140 (tax.), 142 (tax.), 146 (tax., biol., Israel), 158 (key).

Leucospis bifasciata KLUG, 1814: BAUR & AMIET 2000: 367 (key, figs 5a', b'), 381 (tax., fig. 12: tax., biol., Israel, Jordan, Syria), 382 (fig. 12: tax.), 383 (fig. 13: tax.), 385 (fig. 14: tax.).

Leucospis bifasciata KLUG, 1814: LOTFALIZADEH & FAKHRZADEH 2012: 51 (tax., Iran), 52 (figs 1, 5: map).

**Leucospis gibba* KLUG, 1814: BOUČEK 1956: 251 (tax., Israel).

D i s t r i b u t i o n : Albania, Azerbaijan, Bosnia-Herzegovina, Bulgaria, Croatia (mainland, Hvar, Rab), Cyprus, France (mainland), Greece (mainland, Crete, Rhodes), Iran, Israel, Italy (mainland, Sardinia, Sicily), Jordan, Kazakhstan, Montenegro, Russia, Spain (mainland), Syria, Tajikistan, Turkey, Turkmenistan, Ukraine and Uzbekistan.

The material housed in the Biologiezentrum was published by BAUR & AMIET (2000). The doubtful record Sarepta (today Sarafand) from Lebanon in BAUR & AMIET (2000:

381) is a geographical error. In fact, it is the former German village Sarepta (today part of Volgograd) in Russia.

***Leucospis biguetina* JURINE, 1807**

Leucospis biguetina JURINE, 1807: BOUČEK 1956: 251 (tax., Algeria without exact locality, Israel, Morocco without exact locality).

Leucospis biguetina JURINE, 1807: BOUČEK 1959: 436 (key), 437 (fig. 8), 441 (tax., Israel without exact locality).

Leucospis biguetina JURINE, 1807: NIKOLS'KAYA 1960: 196 (key), 198 (tax., descr. ♂ ♀, Iran), 199 (figs 125a-c).

Leucospis biguetina JURINE, 1807: BOUČEK 1974: 103 (key), 115 (figs 171, 172), 140 (tax.), 142 (tax.), 147 (tax., type design., Iraq without exact locality, Iran, North Africa without exact locality, Syria without exact locality), 158 (key).

Leucospis biguetina JURINE, 1807: LOTFALIZADEH & FAKHRZADEH 2012: 52 (tax., cat. Iran, fig. 5: map).

Material examined: Jordan: N Shuna, 1♀, 20-22.4.1996, leg. M. Halada – Iran: Province Azerbaijan-e-Shargi, Sis, 10 km E Shabestar, 1540 m (38°26'N/45°86'E), 1♀, 19.6.2010, leg. Mi. Halada.

Distribution: Algeria, Azerbaidjan, Austria, Bosnia-Hercegovina, Croatia (mainland, Krk), Czech Republic, France (mainland, Corsica), Gibraltar, Greece (mainland), Hungary, Iran, Iraq, Israel, Italy (mainland, Sicily), Jordan, Montenegro, Morocco, Russia, Serbia, Slovakia, Slovenia, Spain (mainland), Switzerland, Syria, Tajikistan, Turkey, Turkmenistan.

First record for the fauna of Jordan.

***Leucospis brevicauda* FABRICIUS, 1804**

Leucospis brevicauda n.sp.: FABRICIUS, 1804: 169 (descr. ♀, Algeria ("Barbaria")).

Leucospis brevicauda FABRICIUS, 1804: SPINOLA 1811: 147 (cat.).

Leucospis brevicauda FABRICIUS, 1804: LUCAS 1849: 317 (tax., descr. ♂, Algeria), pl. 18 (figs 3, 3a).

Leucospis brevicauda FABRICIUS, 1804: SCHLETTERER 1890: 157 (tax.), 159 (tax.), 164 (key), 178 (tax. descr. ♀, Algeria).

Leucospis brevicauda FABRICIUS, 1804: DE DALLA TORRE 1898: 407 (cat.).

Leucospis brevicauda FABRICIUS, 1804: SCHMIEDEKNECHT 1909: 15 (cat.).

Leucospis brevicauda FABRICIUS, 1804: BERLAND 1934b: 67 (key ♀, footnote 1: tax.), 68 (fig. 6), 69 (North Africa without exact locality).

Leucospis brevicauda FABRICIUS, 1804: MASI 1935: 35 (tax., descr. ♂, Algeria, Morocco, Tunisia).

Leucospis brevicauda FABRICIUS, 1804: BOUČEK 1974: 102 (key), 115 (figs 169, 170), 140 (tax.), 141 (tax., type design., Algeria, Morocco, Tunisia), 160 (key).

Leucospis brevicauda FABRICIUS, 1804: MADL 1990: 82 (tax., Algeria, Tunisia).

Leucospis brevicauda FABRICIUS, 1804: BAUR & AMIET 2000: 364 (key, figs 2a, b), 382 (fig. 12: tax.), 383 (fig. 13: tax.), 384 (tax., Morocco, Algeria, Tunisia), 385 (fig. 14: tax.).

**Leucospis dispar* n.sp. (*minor*): FABRICIUS 1804: 170 (descr. ♂, Algeria).

Leucospis dispar FABRICIUS, 1804 (*minor*): SCHLETTERER 1890: 178 (syn.).

Leucospis dispar FABRICIUS, 1804 (*minor*): BOUČEK 1974: 144 (tax., type design.).

**Leucospis fabricii* n.sp.: WESTWOOD, 1839: 257 (descr. ♂, Algeria ("Barbaria")).

Leucospis fabricii WESTWOOD, 1839: WALKER 1860: 16 (cat.).

Leucospis fabricii (!) WESTWOOD, 1839: SCHLETTERER 1890: 178 (syn.).

**Leucospis grohmanni* n.sp.: SPINOLA 1838: 444 (descr. ♂ ♀, Egypt).

Leucospis grohmanni SPINOLA, 1838: WALKER 1860: 16 (cat.).

Leucospis grohmanni SPINOLA, 1838: SCHLETTERER 1890: 178 (syn.).

Leucospis grohmanni SPINOLA, 1838: BOUČEK 1974: 144 (tax., type design.).

M a t e r i a l e x a m i n e d : Morocco: 70 km N Agadir, Tamri, 1 ♂, 8. 5. 1995, leg. Mi. Halada – Oued Tiznit, Massa, 3 ♂♂, 8. 5. 1995, leg. M. Snižek – Taroudant, 1 ♂, 22.4.1990, leg. M. Halada.

D i s t r i b u t i o n : Algeria, Egypt, France (mainland), Italy (mainland, Sardinia, Sicily), Malta, Morocco, Portugal, Spain (mainland, Balears), Tunisia, Turkey.

***Leucospis dorsigera* FABRICIUS, 1775**

Leucospis dorsigera FABRICIUS, 1775: WESTWOOD 1839: 259 (tax., descr. ♂ ♀, Algeria).

Leucospis dorsigera FABRICIUS, 1775: SCHLETTERER 1890: 154 (tax.), 156 (tax.), 157 (tax.), 159 (tax.), 165 (key ♀), 169 (key ♂), 185 (tax., descr. ♂ ♀, Algeria, Egypt, Morocco, Syria), pls 5 (fig. 14), 6 (fig. 28).

Leucospis dorsigera FABRICIUS, 1775: WELD 1922: 11 (key), 32 (Morocco), pl. 3 (fig. 16).

Leucospis dorsigera FABRICIUS, 1775: MAIDL 1933: 128 (Morocco).

Leucospis dorsigera FABRICIUS, 1775: MASI 1934: 6 (tax., Syria).

Leucospis dorsigera FABRICIUS, 1775: MASI 1949: 91 (Israel).

Leucospis dorsigera FABRICIUS, 1775: BOUČEK 1956: 250 (tax., Israel).

Leucospis dorsigera FABRICIUS, 1775: BOUČEK 1959: 435 (fig. 1), 436 (key), 438 (tax., Afghanistan without exact locality, Iran without exact locality, Israel without exact locality).

Leucospis dorsigera FABRICIUS, 1775: STEFFAN 1962: 20 (biol., Israel).

Leucospis dorsigera FABRICIUS, 1775: HERTING 1973: 15 (Israel, host-parasite cat.). not seen

Leucospis dorsigera FABRICIUS, 1775: BOUČEK 1974: 12 (figs 3, 4), 13 (figs 12-14), 102 (key), 115 (fig. 173, Iran), 140 (tax.), 142 (tax., biol., Afghanistan without exact locality, Algeria, Egypt, Iran without exact locality, Iraq without exact locality, Israel without exact locality, Lebanon, Lybia, Morocco without exact locality, Syria, Tunisia), 159 (key).

Leucospis dorsigera FABRICIUS, 1775: MADL 1989: 199 (tax., Egypt without exact locality, Israel without exact locality, Lebanon without exact locality, Morocco).

Leucospis dorsigera FABRICIUS, 1775: MADL 1990: 82 (tax., Morocco).

Leucospis dorsigera FABRICIUS, 1775: HESAMI, AKRAMI & BAUR 2005: 34 (biol., Iran), 43 (host-parasite cat.), 70 (cat. biol.).

Leucospis dorsigera FABRICIUS, 1775: LOTFALIZADEH & FAKHRZADEH 2012: 52 (figs 2, 5: map), 53 (tax., biol., Iran, Iraq).

**Leucospis Algerica* n.sp.: WALKER 1860: 17 (descr. ♀, Algeria).

Leucospis algerica WALKER, 1860: SCHLETTERER 1890: 185 (syn.).

Leucospis algerica WALKER, 1860: BOUČEK 1974: 142 (tax., type design.).

**Leucospis dispar* n.sp.: FABRICIUS 1804: 169 (descr. ♂, Algeria ("Barbaria")).

Leucospis dispar FABRICIUS, 1804: SPINOLA 1811: 147 (cat.).

Leucospis dispar FABRICIUS, 1804: KLUG 1812: 69 (syn.).

Leucospis dispar FABRICIUS, 1804: BOUČEK 1974: 142 (tax., type design.).

**Leucospis scutellata* n.sp.: SPINOLA 1838: 441 (descr. ♀, Egypt).

Leucospis scutellata (!) SPINOLA, 1838: SCHLETTERER 1890: 185 (syn.).

Leucospis scutellata (!) SPINOLA 1838: CASOLARI & CASOLARI MORENO 1980: 66 (Egypt, cat. Spinola Collection Torino).

Leucospis scutellata (!) SPINOLA 1838: BOUČEK 1974: 143 (tax., type design.).

**Leucospis turkestanica* RADOSZKOWSKI, 1886: NIKOLS'KAYA 1952: 80 (key, tax., Iran without exact locality).

Leucospis turkestanica RADOSZKOWSKI, 1886: NIKOLS'KAYA 1960: 32, 197 (key), 209 (fig. 132), 211 (tax., descr. ♂ ♀, 134a-e, biol., Iran without exact locality).

Material examined: Jordan: N Shuna, 2♂♂, 29.-30.4.1996, leg. Ma. Halada – 16 km WNW of Ailun, 600 m, 1♂, 21.5.2007, leg. Z. Kejval – Syria: 60 km S Damascus, Khabab, 1♀, 14.5.1996, leg. Mi. Halada – near Tartus, 1♀, 25.5.1996, leg. Mi. Halada – 20 km NE Latakia, 1♂, 25.5.1996, leg. Marek Halada – 50 km W Homs, 1♂, 12.5.1996, leg. Mi. Halada – Faouar, UN-Camp, 960 m (35°55'N/33°13'E), 1♂, 2.5.2001, 1♂, 6.5.2001, 1♂, 12.5.2001, 1♂, 2.6.2001, 1♂, 14.7.2001, leg. J. Plass – Iran: Province Azerbaijan-e-Shargi, Sis, 10 km E Shabestar, 1540 m (38°26'N/45°86'E), 2♂♂, 19.6.2010, leg. Mi. Halada – Prov. Kerman, 20 km E Ghobira, 1780 m (30°10'N/56°59'E), 1♂, 5.6.2010, leg. Mi. Halada – Province Kerman, Gebal Barez Mountains, Deh Bakri, 1640 m (29°08'N/57°91'E), 1♂, 3.6.2010, leg. Mi. Halada – Province Kerman, 30 km S Sirjan, 1730 m (29°13'55°74'E), 2♀♀, 7.6.2010, leg. Mi. Halada.

Material Zoologisches Museum Hamburg: Israel: Mont Carmel, Hai Bar, 2♂♂, on dead *Prunus*-twigs, 10.7.2000, leg. Török – Nahal Neshet, 2♀♀, on *Foeniculum vulgare* MILLER (Apiaceae), 16.8.2000, leg. Török.

Distribution: Afghanistan, Albania, Algeria, Austria, Azerbaijan, Belgium, Bulgaria, Croatia (mainland, Hvar, Krk, Losinj, Mljet, Rab, Susak), Cyprus, Czech Republic, Egypt, France (mainland, Corsica), Georgia, Germany, Greece (mainland, Poros, Rhodes), Hungary, Iran, Iraq, Israel, Italy (mainland, Lampedusa, Sardinia, Sicily), Jordan, Kazakhstan, Lebanon, Luxembourg, Libya, Macedonia, Malta, Moldova, Montenegro, Morocco, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain (mainland), Switzerland, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, Ukraine, Uzbekistan.

The locality Ksara (Syria) mentioned by BOUČEK (1974: 145) is actually situated in Lebanon. The host record (Coleoptera: Bostrichidae) in STEFFAN (1962: 20) is doubtful.

***Leucospis elegans* KLUG, 1834**

Leucospis elegans n.sp.: KLUG 1834: pl. 37 (fig. 4), (descr. ♀, "Arabia felix").

Leucospis elegans KLUG, 1834: WESTWOOD 1839: 248 (tax., descr. ♀, "Arabia felix").

Leucospis elegans KLUG, 1834: WALKER 1860: 16 (cat.).

Leucospis elegans KLUG, 1834: SCHLETTERER 1890: 154 (tax.), 155 (tax.), 157 (tax.), 159 (tax.), 217 (tax., descr. ♀, "Arabia felix"), pl. 5 (fig. 17).

Leucospis elegans KLUG, 1834: DE DALLA TORRE 1898: 409 (cat.).

Leucospis elegans KLUG, 1834: SCHMIEDEKNECHT 1909: 15 (cat.).

Leucospis elegans KLUG, 1834: BOUČEK 1959: 436 (key), 437 (figs 2-5), 441 (tax., "Arabia felix").

Leucospis elegans KLUG, 1834: BOUČEK 1974: 103 (key), 105 (figs 130, 131), 107 (figs 132, 133), 114 (tax., descr. ♂, "Arabia felix", Pakistan), 160 (key).

Leucospis elegans KLUG, 1834: BOUČEK & NARENDRA 1981: 2 (key), 3 (tax.), 5 (tax., cat.), 6 (figs 15, 16).

Leucospis elegans KLUG, 1834: NARENDRA 1986: 44 (cat.).

Leucospis elegans KLUG, 1834: SCHMID-EGGER 2010: 319 (tax., United Arab Emirates (Abu Dhabi, Dubai, Ras al Khaimah), Oman, Yemen), 320 (pls 1, 2), 324 (key).

Material examined: United Arab Emirates: Dubai, Hatta 1♀, 1.11.1985 leg. I.L. Hamer (NHMW) – Abu Dhabi 1♂, 5.8.1985 leg. I.L. Hamer (NHMW).

Distribution: Oman, Pakistan, United Arab Emirates (Abu Dhabi, Dubai, Ras al Khaimah), Yemen, "Arabia felix".

Leucospis elegans is also known from the Ethiopian region (Sudan).

***Leucospis gigas* FABRICIUS, 1793**

Leucospis gigas FABRICIUS, 1793: LUCAS 1849: 317 (Algeria).

- Leucospis gigas* FABRICIUS, 1793: SCHLETTERER 1890: 154 (tax.), 155 (tax.), 156 (tax.), 157 (tax.), 158 (tax.), 159 (tax.), 167 (key ♀), 169 (key ♂), 203 (tax., descr. ♂ ♀, Iran without exact locality, Syria without exact locality), pls 5 (figs 5, 6, 13), 6 (fig. 20).
- Leucospis gigas* FABRICIUS, 1793: SCHMIEDEKNECHT 1896: 159 (Algeria), 163 (Algeria).
- Leucospis gigas* FABRICIUS, 1793: SCHULZ 1905: 18 (Morocco), 20 (tax., Algeria).
- Leucospis gigas* FABRICIUS, 1793: STRAND 1910: 281 (tax., Algeria).
- Leucospis gigas* FABRICIUS, 1793: BERLAND 1934a: 173 (biol., Algeria, Morocco).
- Leucospis gigas* FABRICIUS, 1793: BERLAND 1934b: 66 (key ♀, fig. 1), 67 (key ♂, footnote 2: distr., tax., biol., Algeria without exact locality), 68 (figs 2-4).
- Leucospis gigas* FABRICIUS, 1793: STECK 1934: 158 (tax., biol., Algeria).
- Leucospis gigas* FABRICIUS, 1793: MASI 1935: 39 (tax., Algeria, Lybia).
- Leucospis gigas* FABRICIUS, 1793: MASI 1949: 91 (tax., descr. ♂, Israel).
- Leucospis gigas* FABRICIUS, 1793: BOUČEK 1956: 251 (tax., Israel).
- Leucospis gigas* FABRICIUS, 1793: BOUČEK 1959: 437 (key, figs 11, 12), 442 (tax., Afghanistan without exact locality, Middle East without exact locality, Near East without exact locality, North Africa without exact locality).
- Leucospis gigas* FABRICIUS, 1793: NIKOLS'KAYA 1960a: 15 (fig. 16), 20 (biol.), 22 (biol.), 26 (biol.), 32, 196 (tax.), 197 (key), 204 (tax., descr. ♂ ♀, biol., Iran without exact locality), 205 (figs 129a-d).
- Leucospis gigas* FABRICIUS, 1793: BYTINSKI-SALZ 1963: 527 (tax., biol., fig. 1: map, Israel), 528 (tab. 1: biol.).
- Leucospis gigas* FABRICIUS, 1793: BOUČEK 1974: 12 (figs 1, 2, 5), 13 (figs 8, 9), 104 (key), 115 (fig. 176), 140 (tax.), 149 (tax., biol., Afghanistan without exact locality, Algeria, Egypt, Israel without exact locality, Iran without exact locality, Israel without exact locality, Lybia, Morocco, Pakistan, Tunisia), 156 (key).
- Leucospis gigas* FABRICIUS, 1793: MADL 1989: 200 (tax., Israel without exact locality, Lebanon without exact locality, Tunisia without exact locality).
- Leucospis gigas* FABRICIUS, 1793: MADL 1990: 83 (tax., Algeria).
- Leucospis gigas* FABRICIUS, 1793: ABRAHAM & PETERS 2011: 267 (without locality (see below)).
- Leucospis gigas* FABRICIUS, 1793: LOTFALIZADEH & FAKHRZADEH 2012: 52 (figs 2, 4, 5: map), 53 (tax., Iran).
- **Leucospis nursei* sp.nov.: CAMERON 1906: 92 (descr. ♂, Pakistan).
- Leucospis nursei* CAMERON, 1906: WELD 1922: 37 (cat.).
- Leucospis nursei* CAMERON, 1906: RAMAKRISHNA AIYAR 1925: 237 (cat. India and Ceylon).
- Leucospis nursei* CAMERON, 1906: MANI 1937: 291 (cat. India), 292 (tax.), 293 (key), 297 (tax., cat.).
- Leucospis nursei* CAMERON, 1906: MANI 1938: 48 (cat. India).
- Leucospis nursei* CAMERON, 1906: BOUČEK 1974: 150 (syn., type design.).
- **Leucaspis* (!) *quettaensis* sp.nov.: CAMERON 1906: 91 (descr. ♂ (not ♀), Pakistan).
- Leucospis quettaensis* CAMERON, 1906: WELD 1922: 37 (cat.).
- Leucospis quettaensis* CAMERON, 1906: RAMAKRISHNA AIYAR 1925: 237 (cat. India and Ceylon).
- Leucospis quettaensis* CAMERON, 1906: MANI 1937: 291 (cat. India), 292 (tax.), 293 (key), 297 (tax., cat.).
- Leucospis quettaensis* CAMERON, 1906: MANI 1938: 48 (cat. India).
- Leucospis quettaensis* CAMERON, 1906: BOUČEK 1974: 149 (syn., type design.).
- **Leucospis gigas* var. *rufonotata* WESTWOOD, 1839: SCHMIEDEKNECHT 1896: 163 (tax., Algeria).
- Leucospis rufonotata* WESTWOOD, 1839: MASI 1935: 39 (tax., Lybia).
- Leucospis rufonotata* WESTWOOD, 1839: MADER 1937: 160 (tax., key, Algeria).
- Leucospis varia* KLUG, 1814: CASOLARI & CASOLARI MORENO 1980: 66 (Algeria, cat. Spinola Collection Torino).

H o s t : Megachilidae: *Hoplitis pallicornis* (FRIESE, 1895) (see below).

Material examined: Israel: Jericho, 1♂ 1♀, leg. O. Schmiedeknecht (NHMW) – Jordan: N Shuna, 2♀♀, 29-30.4.1996, 1♀, 30.4.1996, leg. Ma. Halada – Jordan Valley, Deir Alla, 1♀, 27.4.1996, leg. Mi. Halada – Jarash, near Burma, Al Huna, 4♀♀, 15.5.2010, leg. M. Snižek – Lebanon: Bsharri (Becharré), 1900 m, 1♀, 24-30.6.1931, leg. H. Zerny (NHMW) – Iran: Province Kerman, 30 km S Sirjan, 1730 m (29°13'N/55°74'E), 1♀, 7.6.2010, leg. Mi. Halada – Province Kerman, Gebal Barez Mountains, Deh Bakri, 1640 m (29°08'/57°91'E), 1♂, 2♀♀, 3.6.2010, leg. Mi. Halada – Province Kohkiluyeh-Boyer Ahmad, Kuh Gol near Sisakht, 2500 m (30°84'N/51°53'E), 1♀, 9.6.2010, leg. Mi. Halada.

Material Zoologisches Museum Hamburg: Algeria: El Mesrane, 6♀♀, 1931, leg. K. Predota – Hassi Bahbah, 1♀, 1930, 1♀, 1931, leg. K. Predota – Israel: Mount Carmel, Nahal Neshet, 1♀, on *Eryngium creticum* LAMARCK 1798 (Apiaceae), 14.6.2000, leg. Török – Wadi Denia, 1♀, collected 12.3.2000, emerged 16.4.2000, ex *Hoplitis pallicornis* (FRIESE 1895) in nest of *Chalicodoma cf. sicula* (ROSSIUS 1792), leg. Török.

Distribution: Afghanistan, Albania, Algeria, Armenia, Austria, Bosnia-Herzegovina, China, Croatia (mainland, Brac, Hvar, Krk, Rab, Susak), Egypt, France (mainland, Corsica), Germany, Gibraltar, Greece (mainland, Chios, Corfu, Crete, Kalymnos, Syros), Hungary, Iran, Israel, Italy (mainland, Sardinia, Sicily), Jordan, Kazakhstan, Kyrgyzstan, Lebanon, Libya, Macedonia, Malta, Montenegro, Morocco, Pakistan, Romania, Russia, Slovakia, Slovenia, Spain (mainland), Switzerland, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, Ukraine, Uzbekistan.

First record for the fauna of Jordan.

***Leucospis guzeratensis* WESTWOOD, 1839**

Leucospis guzeratensis WESTWOOD, 1839: BOUČEK 1974: 161 (key), 167 (figs 194, 195), 182 (tax., Pakistan).

Leucospis guzeratensis WESTWOOD, 1839: BOUČEK & NARENDHAN 1981: 3 (key, tax.), 6 (figs 10-12), 7 (tax., cat.), 13 (cat.).

Distribution: Pakistan.

Known from the Oriental region.

***Leucospis intermedia* ILLIGER, 1807**

Leucospis intermedia ILLIGER, 1807: SPINOLA 1838: 442 (tax., Egypt).

Leucospis intermedia ILLIGER, 1807: SCHLETTERER 1890: 150 (tax.), 159 (tax), 167 (key ♀), 170 (key ♂), 195 (tax., descr. ♂ ♀, Algeria, Egypt without exact locality), pls 5 (fig. 11), 6 (fig. 29).

Leucospis intermedia ILLIGER, 1807: BERLAND 1934b: 66 (key ♀), 67 (key ♂), 68 (biol., France (mainland), Morocco, Switzerland).

Leucospis intermedia GLL. (!): MASI 1949: 91 (tax., Israel).

Leucospis intermedia ILLIGER, 1807: NIKOLS'KAYA 1952: 79 (key, tax., Iran without exact locality).

Leucospis intermedia ILLIGER, 1807: BOUČEK 1956: 250 (Cyprus, Israel, Turkey).

Leucospis intermedia ILLIGER, 1807: BOUČEK 1959: 437 (key, figs 11, 12), 443 (tax, biol., widely distributed in the Mediterranean region up to central Asia, Egypt).

Leucospis intermedia ILLIGER, 1807: BOUČEK 1974: 104 (key), 140 (tax.), 149 (tax.), 153 (tax., biol., Afghanistan without exact locality, Algeria without exact locality, Egypt, Iran without exact locality, Israel without exact locality, Lebanon, Libya), 165 (fig. 187), 156 (key).

Leucospis intermedia ILLIGER, 1807: CASOLARI & CASOLARI MORENO 1980: 66 (Egypt, cat. Spinola Collection Torino).

Leucospis intermedia ILLIGER, 1807: MADL 1989: 437 (key, figs 11, 12), 201 (tax., Israel without exact locality, Lebanon without exact locality).

- **Leucospis frenata* n.sp.: KLUG 1834: pl. 37 (figs 2, 3) (descr. ♂ ♀, Egypt).
Leucospis frenata KLUG, 1834: WESTWOOD 1839: 247 (tax., descr. ♂ ♀, Egypt).
Leucospis frenata KLUG, 1834: SCHLETTERER 1890: 156 (tax.), 167 (key ♀), 170 (key ♂), 200 (tax., descr. ♂ ♀, Egypt), pl. 5 (fig. 16).
Leucospis frenata KLUG, 1834: DE DALLA TORRE 1898: 409 (cat.).
Leucospis frenata KLUG, 1834: SCHMIEDEKNECHT 1909: 16 (cat.).
Leucospis frenata KLUG, 1834: BOUČEK 1959: 443 (syn.).
Leucospis frenata KLUG, 1834: BOUČEK 1974: 153 (tax., type design.).

Material examined: Jordan: N Shuna, 1 ♀, 20-22.4.1996, leg. M. Halada; 1 ♀, 29-30.4.1996, leg. Ma. Halada – 10 km N Petra, 1 ♂, 3.5.1996, leg. Mi. Halada – Jordan Valley, Dayr Alla, 1 ♂, 27.4.1996, leg. Marek Halada; 1 ♂, 27.4.1996, leg. Mi. Halada – 20 km N Shuna, Tall ac Arbatin, 1 ♂, 19.4.1996, leg. Marek Halada – Lebanon: Bsharri (Becharré), The Cedars, 1900 m, 1 ♂, 24-30.6.1931, leg. H. Zerny (NHMW) – Syria: 30 km S Suwayda Dibbin, 1 ♂, 15-17.5.1996, leg. Marek Halada – Iran: Province Mazandaran, 75 km S Chalus, 2400 m, N Paßhöhe, 1 ♂, 24.7.1977, leg. A.W. Ebmer.

Distribution: Afghanistan, Albania, Algeria, Armenia, Austria, Azerbaijan, Croatia (mainland, Hvar, Krk), Cyprus, Czech Republic, Egypt, France (mainland, Corsica), Germany, Greece (mainland), Hungary, Iran, Israel, Italy (mainland, Sardinia, Sicily), Jordan, Kazakhstan, Lebanon, Lybia, Malta, Moldova, Morocco, Russia, Slovakia, Spain (mainland), Switzerland, Syria, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan.

First record for the fauna of Jordan and Syria.

***Leucospis miniata* KLUG, 1834**

- **Leucospis miniata* n.sp.: KLUG 1834: pl. 37 (fig. 1), (descr. ♀, Egypt).
Leucospis miniata KLUG, 1834: SPINOLA 1838: 441 (cat., Egypt).
Leucospis miniata KLUG, 1834: WESTWOOD 1839: 244 (tax., descr. ♀, Egypt).
Leucospis ? *miniata* KLUG, 1834: WALKER 1846: 2 (tax., without exact locality, cat. British Museum London).
Leucospis miniata KLUG, 1834: WALKER 1860: 16 (cat.).
Leucospis miniata KLUG, 1834: LUCAS 1849: 316 (descr. ♂, Algeria), pl. 18 (figs 2, 2a-f).
Leucospis miniata KLUG, 1834: LUCAS 1858: 102 (biol., Algeria).
Leucospis miniata KLUG, 1834: SCHLETTERER 1890: 155 (tax.), 157 (tax.), 168 (key ♀), 210 (tax., descr. ♀, Egypt).
Leucospis miniata KLUG, 1834: SHIPP 1894: 16 (tax.).
Leucospis miniata KLUG, 1834: DE DALLA TORRE 1898: 412 (cat.).
Leucospis miniata KLUG, 1834: SCHMIEDEKNECHT 1909: 16 (cat.).
Leucospis miniata KLUG, 1834: STOREY 1916: 5 (Egypt).
Leucospis miniata KLUG, 1834: BERLAND 1934a: 174 (tax., North Africa).
Leucospis miniata KLUG, 1834: BOUČEK 1959: 438 (key), 442 (tax., Egypt).
Leucospis miniata KLUG, 1834: BYTINSKI-SALZ 1963: 529 (tax., Egypt).
Leucospis miniata KLUG, 1834: BOUČEK 1974: 104 (key), 111 (fig. 158), 132 (tax., Algeria, Egypt, Israel, Lybia, Morocco).
Leucospis miniata KLUG, 1834: CASOLARI & CASOLARI MORENO 1980: 66 (Egypt, Malta, cat. Spinola Collection Torino).
Leucospis miniata KLUG, 1834: MADL 1989: 201 (Egypt).
Leucospis miniata KLUG, 1834: BAUR & AMIET 2000: 364 (footnote: tax.).
Leucospis miniata KLUG, 1834: SCHMID-EGGER 2010: 323 (tax., Tunisia without exact locality, Israel without exact locality).

Host: Megachilidae: *Chalicodoma sicula* (ROSSIUS, 1792) (LUCAS 1858).

Distribution: Algeria, Egypt, Italy (Lampedusa), Israel, Lybia, Malta, Morocco, Tunisia.

***Leucospis vanharteni* SCHMID-EGGER, 2010**

Leucospis vanharteni nov.spec.: SCHMID-EGGER 2010: 322 (descr. ♀, biol., United Arab Emirates: Sharjah), 323 (pls 4-6), 324 (key, pl. 7).

Distribution: United Arab Emirates (Sharjah).

***Leucospis* sp.**

Leucospis aff. *namibica* BOUČEK, 1974: SCHMID-EGGER 2010: 321 (tax., pl. 3, Yemen).

Distribution: Yemen.

The identification is uncertain (SCHMID-EGGER 2010: 321).

Acknowledgements

We are greatly indebted to Fritz Gusenleitner (Biologiezentrum des Oberösterreichischen Landesmuseums at Linz, Austria) for making available the material and Manuela Vizek (Naturhistorisches Museum Wien, Austria) for her support in this study. Many thanks to Rudolf Abraham (Hamburg, Germany) for sending the list of the *Leucospis* species of the Zoologisches Museum Hamburg.

Zusammenfassung

Neue Funddaten der Familie Leucospidae (*Leucospis biguetina* JURINE, 1807, *L. brevicauda* FABRICIUS, 1804, *L. dorsigera* FABRICIUS, 1775, *L. gigas* FABRICIUS, 1793 and *L. intermedia* ILLIGER, 1807) von Nordafrika und vom Mittleren Osten werden mitgeteilt. Das Erscheinungsjahr von KLUG's Publikation (Die europäischen Arten der Insekten-Gattung: *Leucospis*) ist 1812.

References

- ABRAHAM R. & R.S. PETERS (2011): The Leucospidae (Hym. Chalcidoidea) of the Zoologisches Museum Hamburg. — Entomologische Mitteilungen aus dem Zoologischen Museum Hamburg **15** (185): 267-269.
- BAUR H. & F. AMIET (2000): Die Leucospidae der Schweiz, mit einem Bestimmungsschlüssel und Daten zu den europäischen Arten. — Revue Suisse de Zoologie **107** (2): 359-388.
- BERLAND L. (1934a): Un cas probable de parthénogenèse géographique chez *Leucospis gigas* (Hyménoptère). — Bulletin de la Société Zoologie de France **59** (2): 172-175.
- BERLAND L. (1934b): Notes sur les Hyménoptères XVI. Les *Leucospis* de France (Chalcididae). — Revue Française d'Entomologie **1** (2): 65-69.
- BOUČEK Z. (1956): A contribution to the knowledge of the Chalcididae, Leucospidae and Eucharitidae (Hymenoptera, Chalcidoidea) of the Near East. — Bulletin of the Research Council of Israel **5B** (3-4): 227-259.
- BOUČEK Z. (1959): A revised key to the West-Palearctic species of *Leucospis* (Hym., Chalc.), with some new synonymy. — Acta Entomologica Musei Nationalis Pragae **33** (562): 435-444.

- BOUČEK Z. (1974): A Revision of the Leucospidae (Hymenoptera: Chalcidoidea) of the World. — Bulletin of the British Museum (Natural History), Entomology, Supplement **23**: 241 pp.
- BOUČEK Z. & T.C. NARENDHAN (1981): The *Leucospis* species of India and adjacent countries (Hymenoptera: Leucospidae) — Oriental Insects **15** (1): 1-15.
- BYTINSKI-SALZ H. (1963): Geographical variation and sex-ratio in *Leucospis gigas* (Hymenoptera, Chalcidoidea). — Acta Entomologica Musei Nationalis Pragae **35**: 527-530.
- CAMERON P. (1906): On the Tenthredinidae and Parasitic Hymenoptera collected in Baluchistan by Major C.G. NURSE. — Journal of the Bombay Natural History Society **17** (1): 89-107.
- CASOLARI C. & R. CASOLARI MORENO (1980): Cataloghi I – Collezione Imenoterologica di Massimo SPINOLA. — Torino (Museo Regionale di Scienze Naturali): 165 pp.
- DALLA TORRE C.G. de (1898): Catalogus Hymenopterorum hucusque descriptorum systematicus et synonymicus Volumen V: Chalcididae et Proctotrupidae. — Leipzig (W. ENGELMANN): I-VIII, 598 pp.
- FABRICIUS J.C. (1804): Systema Piezatorum. — Braunschweig (K. REICHARD): III-XIV, 440 pp., 1-30.
- HERTING B. (1973): A catalogue of parasites and predators of terrestrial arthropods. Section A. Host or Prey/Enemy **3**: Coleoptera and Strepsiptera. — Farnham Royal (Commonwealth Agricultural Bureau): I-II, 185 pp. **not seen**
- HESAMI S.A., AKRAMI M.A. & H. BAUR (2005): *Leucospis dorsigera* (Hymenoptera, Leucospidae) as a hyperparasitoid of Cerambycidae (Coleoptera) through Xoridinae (Hymenoptera: Ichneumonidae). — Journal of Hymenoptera Research **14** (1): 66-67.
- KLUG F. (1812): Die europäischen Arten der Insekten-Gattung: *Leucospis*. — Magazin der Gesellschaft Naturforschender Freunde zu Berlin für die Neuesten Entdeckungen in der Gesammten Naturkunde **6** (1): 65-71.
- KLUG F.F. (1834): Symbolae physicae, seu icones et descriptiones insectorum, quae in itinere per Africam borealem et Asiam occidentalem Friderici Guilelmi HEMPRICH et Christiani Godofredi EHRENBURG, studio, novae aut illustratae redierunt. Pars Zoologica. Insecta. **4**. — Berlin (G. REIMER): pls 31-40.
- LOTFAZADEH H. & N. FAKHRZADEH (2012): A short review of the family Leucospidae (Hym.: Chalcidoidea) in Iran. — Biharean Biologist **6** (1): 51-54.
- LUCAS H. (1849): Histoire Naturelle des Animaux Articulés. Troisième Partie. Insectes (suite). — In: Exploration Scientifique de l'Algérie pendant les Années 1840, 1841 1842, Sciences Physiques, Zoologie **3**: 527 pp.
- LUCAS H. (1858): Note sur le *Leucospis miniata* parasite de la *Chalicodoma sicula*. — Bulletins Trimestriels de la Société Entomologique de France, 3^e Série, **6** (2): 102.
- MADER L. (1937): Beitrag zur Kenntnis der Hymenopteren. II. — Entomologische Zeitschrift vereinigt mit Internationale Entomologische Zeitschrift **51** (15-16): 155-156, 160-162.
- MADL M. (1989): Zur Kenntnis der paläarktischen *Leucospis*-Arten unter besonderer Berücksichtigung der Fauna Österreichs (Hymenoptera, Chalcidoidea, Leucospidae). — Entomofauna **10** (12): 197-201.
- MADL M. (1990): 2. Beitrag zur Kenntnis der paläarktischen *Leucospis*-Arten unter besonderer Berücksichtigung der Fauna Österreichs (Hymenoptera, Chalcidoidea, Leucospidae). — Linzer biologische Beiträge **22** (1): 81-87.
- MAIDL F. (1933): Verzeichnis der von Univ.-Professor Dr. Franz WERNER und Prof. Dr. Richard EBNER 1930 in Marokko gesammelten Sphegiden (Hym.) und Scoliiden (Hym.). Mit Beschreibung einer neuen Art und einem Verzeichnis der übrigen in Marokko gesammelten Hymenopteren. — Konowia **12** (1-2): 121-128.
- MANI M.S. (1937): A revision of the Indian chalcid wasps of the subfamily Leucospinae (Parasitic Hymenoptera). — Records of the Indian Museum **39** (3): 287-302.

- MANI M.S. (1938): Catalogue of Indian Insects Part 23 – Chalcidoidea. — New Delhi (Government of India): I-II, 1-170 pp.
- MASI L. (1934): Calcididi dell'Isola di Cipro raccolti dal Sig. G.A. MAVROMOUSTAKIS. — *Annali del Museo Civico di Storia Naturale Giacomo Doria* **57**: 5-22.
- MASI L. (1935): Note diverse per la sistematica delle *Leucospis* (Hymen. Chalcididae). — *Bollettino della Società Entomologica Italiana* **67** (3): 36-43.
- MASI L. (1949): Note su Chalcididae della Palestina (Chalcididae ASHM. ed Eucharitidae ASHM.) (Hymenoptera: Chalcidoidea). — *Bollettino della Società Entomologica Italiana* **79** (7-10): 91-94.
- NARENDHAN T.C. (1986): Family Leucospidae. — In: SUBBA RAO B.R. & M. HAYAT (eds), *The Chalcidoidea (Insecta: Hymenoptera) of India and the adjacent countries Part II. A Catalogue of Chalcidoidea of India and the adjacent countries.* — *Oriental Insects* **20**: 43-45.
- RAMAKRISHNA AIYAR T.V. (1925): A Check-list of Indo-Ceylonese Chalcid flies (Chalcidoidea). — *Spolia Zeylanica* **13** (2): 235-254.
- SCHLETTERER A. (1890): Die Gruppe der Hymenopterengattungen *Leucospis* F., *Polistomorpha* WESTW. und *Marres* WALK. — *Berliner Entomologische Zeitschrift* **35** (2): 141-302.
- SCHMID-EGGER C. (2010): Order Hymenoptera, Family Leucospidae. — *Arthropod Fauna of UAE* **3**: 319-324.
- SCHMIEDEKNECHT O. (1896): Meine Reise nach der Provinz Oran in Algerien. — *Természetráji Füzetek* **19** (2): 140-164.
- SCHMIEDEKNECHT O. (1909): Hymenoptera Fam. Chalcididae. — In: WYTSMAN P. (ed.), *Genera Insectorum* **97**: I-VIII, 550 pp.
- SCHULZ W.A. (1905): Beiträge zur Kenntnis der Hymenopteren-Fauna Afrikas. — In: *Hymenopteren-Studien*: 1-69.
- SHIPP J.W. (1894): Notes on Chalcididae. — *Entomologist* **27** (1): 16.
- SPINOLA M. (1811): Essai d'une nouvelle classification des Diptéropaires. — *Annales du Muséum d'Histoire Naturelle* **17**: 138-152.
- SPINOLA M. (1838): Compte Rendu des Hyménoptères recueillis par M. FISCHER pendant son Voyage en Égypte, et communiqués par M. le Docteur WALTIL a Maximilien SPINOLA. — *Annales de la Société Entomologique de France* **7** (4): 437-546.
- STECK Th. (1934): Die schweizerischen Arten der Chalcidiergattung *Leucospis* F. — *Mitteilungen der Schweizerischen Entomologischen Gesellschaft* **36** (4): 157-159.
- STEFFAN J.R. (1962): Chalcidoidea de l'Institut National d'Entomologie de Rome. — *Fragmenta Entomologica* **4** (3): 19-39.
- STOREY G. (1916): List of Egyptian Insects in the Collection of the Ministry of Agriculture. — Ministry of Agriculture, Egypt, Technical and Scientific Service, Entomology Section, *Bulletin* **5**: III-V, 50 pp.
- STRAND E. (1910): Ueber von Herrn Prof. Dr. SEITZ in der algerischen Provinz Constantine gesammelte Hymenoptera (Mit einer biologischen Einleitung von Dr. A. SEITZ). — *Entomologische Zeitschrift* **24** (39): 214-220.
- WALKER F. (1946): List of the Specimens of Hymenopterous Insects in the Collection of the British Museum. — London: IV-VII, 237 pp.
- WALKER F. (1860): Characters of undescribed Species of the Genus *Leucospis*. — *Journal of Entomology, Descriptive and Geographical* **1** (1): 16-23.
- WELD C.J. (1922): Studies on Chalcid-flies of the Subfamily Leucospidae, with Descriptions of New Species. — *Proceedings of the U.S. National Museum* **61** (6): 43 pp., pls 1-4.
- WESTWOOD J.O. (1834): On *Leucospis*; a Genus of Hymenopterous Insects. — *Entomological Magazine* **2** (2): 212-218.

WESTWOOD J.O. (1839): Die Hymenopteren-Gattung *Leucospis*, monographisch behandelt.
— Zeitschrift für Entomologie **1** (2): 237-266, pls 3, 4.

Authors' addresses:

Michael MADL
2. Zoologische Abteilung
Naturhistorisches Museum
Burgring 7
1010 Wien, Austria
E-mail: michael.madl@nhm-wien.ac.at

Martin SCHWARZ
Eben 21
4202 Kirchschlag, Austria
E-mail: schwarz-entomologie@aon.at